KPH+

SERIES SERVO PLANETARY GEARBOX

KPH+ is our highly successful high precision gearbox series. All KPH+ gears adopt the alloy forged steel as the raw material, the powerful heat treatment, the latest helical gear design, full needle roller bearings, and global top level gear grinding craft. Perfect integrated design of caged planetary carrier and output shaft to realize high rigidity. For any high precision applications, KPH+ would be your great option for gearbox.



Gearbox Options

- Output shaft key way, without key be available.
- Synthetic Lubrication Grease, low temperature grease available.
- Adaptor flange solution available.

Gearbox Features

- Extremely high precision gearing and powerful stability.
- High efficiency and low noise control.
- Long constant operation service lifetime.
- Optimized inertia moment.
- Limited temperature rise.
- Flexible input mounting dimensions.
- Maintenance free for whole service lifetime.

KPH+ Technical Data

Model		KPH070	KPH090	KPH120	KPH160	KPH205	KPH255	Ratio	Stage
Nominal Output Torque	Nm	46	145	300	550	1250	1800	4	1
		55	155	320	650	1200	2050	5	
		50*	145*	300*	610*	1000*	1850*	6	
		50*	135	290*	540	1000	1750*	7	
		45	115	255	510*	1000*	1550	8	
		42	105*	220*	440	910	1500*	9	
		42	105	220	440	910	1500	10	
		56	125	310	500	650	1800*	12	2
		50	125	310	500	850	1200	15	
		52	145	300	550	1250	2800	16	
		55	145	300	650	1200	3000	20	
		55	155	320	650	1200	3000	24	
		52	145	305	550*	1250*	2800*	32	
		55*	155	320*	650	1200	2850	35	
		55	155	320	550*	1200*	3050*	40	
		55*	155	320*	650	1200	2050	45	
		55	155	320	650	1200	2850	50	
		45	115	255	510/63	1000/63	1850	64	
		52	155	320	650	1200	3050	80	3
		52	155	320	650	1200	3050	100	
		52	155	320	650	1200	3050	125	
		52	155	320	650	1200/140	3050/140	160	
		52	155	320	650	1200/180	3050/180	200	
		52	155	320	650/224	1200/252	3050/252	256	
		52	155	320	650/280	1200/315	3050/315	320	
		45	115	255	510/504	1000/441	2050/504	512	
Max Output Torque	Nm	Triple Rated Output Torque							
Max Radial Force[1]	N	2500	4500	7800	12000	18000	45000		
Max Axial Force[1]	N	2000	3500	6000	10000	15000	225000		
Operating Temperature	℃	−25~90							
Mouting Position		Any Directions							
Lubrication		Synthetic Lubrication Grease							
Protection Class		IP65							
Efficiency at full load	%	97							1
		95							2
		93							3
Service Lifetime	h	20,000 (Continuous Operation)							
Unit Weight	kg	1.4	3.3	5.5	20	31	70		1
		1.6	4.5	8	25	39	80		2
		1.8	5.5	10	30	48	90		3

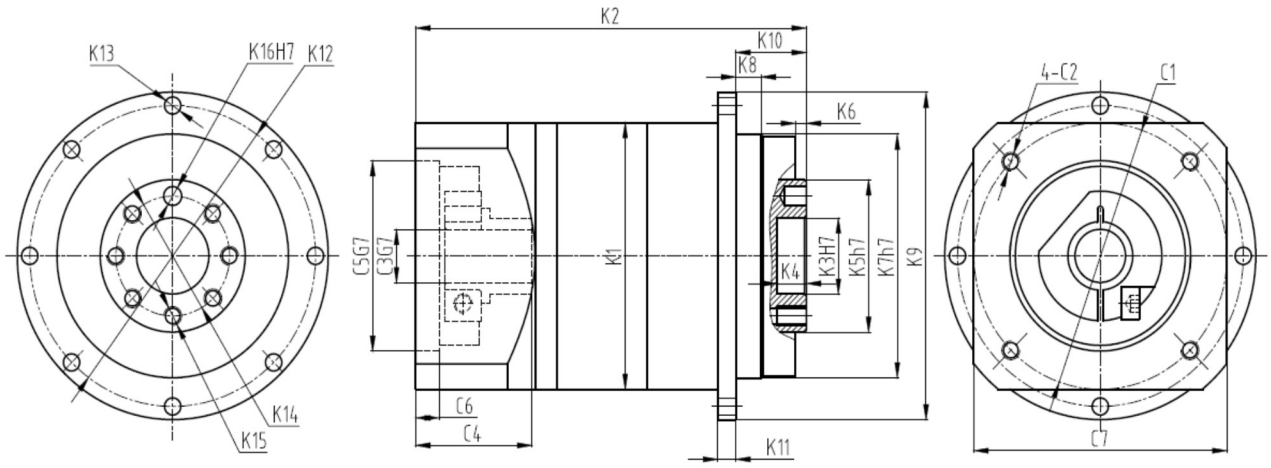
1. Values based on the output shaft speed n2=100 RPM

KPH+ Technical Data

Model		KPH070	KPH090	KPH120	KPH160	KPH205	KPH255	Ratio	Stage
Mass Moment of Inertia	kgcm^2	0.14	0.48	2.74	7.54	23.67	37.37	4	1
		0.13	0.47	2.71	7.42	22.75	33.27	5	
		0.13	0.47	2.71	7.42	22.75	30.27	6	
		0.13	0.47	2.62	7.25	22.48	27.84	7	
		0.13	0.45	2.62	7.14	22.59	25.84	8	
		0.13	0.44	2.62	7.14	22.59	24.84	9	
		0.13	0.44	2.57	7.14	22.55	23.56	10	
		0.127	0.44	2.56	12.35	12.35	15.98	12	2
		0.124	0.44	2.58	12.35	12.30	28.92	15	
		0.12	0.43	1.75	7.47	7.54	14.67	16	
		0.075	0.44	1.5	6.65	7.42	13.75	20	
		0.075	0.44	1.49	5.81	7.54	7.54	24	
		0.064	0.39	1.3	6.34	7.14	6.59	32	
		0.064	0.39	1.3	5.36	7.14	6.59	35	
		0.064	0.39	1.3	4.08	7.14	6.59	40	
		0.064	0.39	1.3	5.36	7.14	6.59	45	
		0.064	0.39	1.3	4.08	7.14	6.59	50	
		0.075	0.39	1.5	7.5	7.54	6.59	64	
		0.075	0.44	1.49	7.4	7.54	6.59	80	3
		0.064	0.44	1.45	7.3	7.42	6.59	100	
		0.064	0.44	1.3	7.3	7.42	6.59	125	
		0.064	0.39	1.3	6.5	7.14	6.59	160	
		0.064	0.39	1.3	6.2	7.14	6.59	200	
		0.064	0.39	1.3	5.7	7.14	6.59	256	
		0.064	0.39	1.3	5.4	7.14	6.59	320	
		0.064	0.39	1.3	5.4	7.14	6.59	512	
Backlash	arcmin	<1	<1	<1	<1	<1	<1		1
		<3	<3	<3	<3	<3	<3		2
		<5	<5	<5	<5	<5	<5		3
Torsional Rigidity	Nm/arcmin	7	14	25	50	140	200		
Running Noise[1]	dB(A)	<58	<60	<63	<65	<67	<70		
Max Input Speed[2]	min^{-1}	6000	6000	6000	6000	4000	4000		
Rated Input Speed[2]	min^{-1}	3000	3000	3000	3000	2000	2000		

1. Measured on input running speed at n1=3000 RPM without loading, 1m distance.

KPH+ Dimensions



Model	KPH070			KPH090			KPH120			KPH160			KPH205		
Stage	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
K1	Φ70			Φ97			Φ120			Φ160			Φ210		
K2	108	131.7	155.4	137.2	168.5	199.8	177	218.8	227	232.7	293.7	380.2	235	297	358
K3	Φ20			31.5			40			50			80		
K4	8			12			12			12			22.5		
K5	Φ40			Φ63			Φ80			Φ100			Φ160		
K6	3			6			6			6			6		
K7	Φ64			Φ90			Φ110			Φ140			Φ200		
K8	7			10			10			14.6			15		
K9	Φ86			Φ118			Φ145			Φ179			Φ247		
K10	19.5			30			29			38			56		
K11	5			8			10			10			12		
K12	Φ79			Φ109			Φ135			Φ168			Φ233		
K13	8-Φ4.5			8-Φ5.5			8-Φ5.5			12-Φ6.6			12-Φ9		
K14	φ31.5			Φ50			Φ63			Φ80			Φ125		
K15[1]	7-M5X8			7-M6X12			11-M6X15			11-M8X18			11-M10X17		
K16	Φ5X6			Φ6X7			Φ6X7			Φ8X8			Φ10X10		
C1	Φ70			Φ90			Φ145		Φ90	Φ200		Φ145	Φ215		Φ200
C2	M5X12			M6X15			M8X20		M6X15	M12X25		M8X20	M12X25		M12X25
C3	Φ14			Φ19			Φ24		Φ19	Φ35		Φ24	Φ42		Φ35
C4	32.1			41.6			61.3		41.6	82		61.3	82.5		82
C5	Φ50			Φ70			Φ110		Φ70	Φ114.3		Φ110	Φ180		Φ114.3
C6	6.5			6.5			8		6.5	8		8	8		8
C7	70			97			120		89	175		120	190		175

Order Instructions

Order Code: KPH+ – 120 – 2 – 15 – P0 – Servo Motor

KPH+

Gearbox Series: KPH+

120

Gearbox Size

2

Gearbox Stage

15

Gearbox Ratio

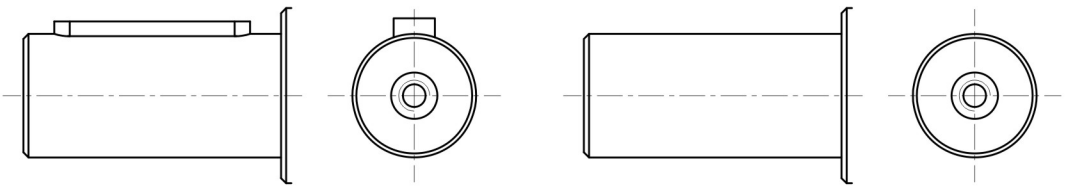
P0

Gearbox Precision

Servo Motor

Motor Manufacturer and model

Output Shaft Key Option



S1: Output shaft with key

S2: Output shaft without key

Ordering Example: KPH+120-2-15-S1-P2-ABB-8M1230

If there is any question, please ask our engineering sales for solutions.

Solution Memo



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